Department of Veterans Affairs **VHA DIRECTIVE 2000-036**
Veterans Health Administration
Washington, DC 20420 **October 5, 2000**

VHA DECISION SUPPORT SYSTEM (DSS) STANDARDIZATION

1. PURPOSE: This Veterans Health Administration (VHA) Directive defines the extent to which medical centers standardize their Decision Support System's (DSS) basic structure.

2. BACKGROUND

a. VHA, as one of the largest integrated health care systems in the world, currently manages facilities that provide health care across the nation. Each facility is unique with respect to the variety of patients treated, practice patterns used, and costs associated with labor, supplies, and physical plant maintenance. DSS serves as a mechanism for integrating expenses and workload, simulating business issue scenarios, and monitoring patient treatment patterns. DSS was carefully templated to bring the rigor of standardization necessary in this complex medical environment where the range of care is diverse and where there can be multiple practice patterns for providing care. DSS supports comparisons between facilities for assessing treatment protocols and resources consumed during treatment, including production unit (department) group costs. DSS provides the link between expenses, workload, and patient utilization. By linking the costs associated with patient utilization and attaching the information to patient records, managers can now analyze patterns of health care delivery, monitor performance measures, and consider cost efficiency when managing workload and controlling medical care costs. To accomplish this, DSS established a basic model for standardization that is utilized by facilities.

b. This standardization is necessary in order for DSS to achieve its full potential as the Agency's first automated managerial cost accounting and clinical information tool used to assess the delivery of medical care across facilities.

c. The information derived from DSS will provide VHA managers with comparable expense and clinical information for use in determining clinical decisions, managing workload, and controlling medical care costs.

3. POLICY: It is VHA policy that medical facility directors are to ensure that, in order to facilitate national comparisons of DSS data, each facility's DSS database structure meets standardization criteria for adhering to the DSS Basic Model. ***NOTE:*** *The DSS Steering Committee has been charged with managing this initiative. They oversee the DSS Standardization Subcommittee to implement and monitor the policy.*

4. ACTION: VHA facilities must employ the processes contained in the DSS Basic Model and Standardization Guidelines for developing and maintaining their DSS structures. The three major components of the basic DSS model for standardization are presented as follows:

a. **The DSS Account Level Budgeter Cost Center (ALBCC) (expenses and hours aggregated at the DSS financial center level).** Each facility will use the templated ALBCC numbers contained on the DSS National Department-ALBCC List as a reference.

b. **The DSS Production Unit or DSS Department.** Each facility will use the templated department numbers contained on the DSS National Department-ALBCC List.

c. **DSS Nationally-numbered, Intermediate Products.** Each facility will use the templated department numbers contained on the DSS National Product List. ***NOTE:*** *The most current version of the Basic Model documents may be retrieved from: http://152.128.193.247/dss/dsslibrary/library/documents/SteeringCommittee*

NOTE: *In addition, documents describing standardization practices to be employed for associating expenses and hours, intermediate products, and relative values of intermediate products with the appropriate DSS cost centers and departments are contained in a variety of DSS training manuals and memoranda. Training materials relating to DSS structure building and processes are located on the Veterans Health Information and Technology Architecture (VistA) University web site: http://vaww.vistau.med.va.gov/VistaU/Vistau.htm The attachment to this directive delineates practices associated with DSS standardization (processes and structure) and updated standardization materials may be found at: http://152.128.193.247/dss/dsslibrary/library/documents/SteeringCommittee*

5. REFERENCES

a. Office of Inspector General, Audit of Veterans Health Administration Decision Support System Standardization, Report N. 9R4-A19-075, March 31, 1999.

b. DSS Principles and Rules for Standardization, Memo from Dan Marsh, August 11, 1998.

c. VHA VACC-BOC Handbook, September 28, 1994.

d. DSS VA Account List (updated annually).

e. VHA DSS Directive (updated annually).

f. DSS National Product Lists (updated annually).

g. DSS Fiscal Mapping Training for IR6, May 1997.

h. DSS IR6 Department and Product identification Training, June 1997.

i. DSS Glossary.

j. DSS National Department-ALBCC List, (updated annually).

k. National DSS Indirect Allocation Sequence Table (updated annually).

l. Current Procedural Terminology Manual, 4th Edition. 1999.

6. FOLLOW-UP RESPONSIBILITY: The Office of Information Implementation and Training Services (194), is responsible for the contents of this directive. Questions may be referred to Russ Jones at 615-867-6108.

7. RECISSIONS: This VHA Directive expires October 5, 2005.

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Under Secretary for Health

Attachment

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ATTACHMENT A

STANDARDIZATION DEFINTIONS, STRUCTURES AND PROCESSESES

1. STANDARDIZATION DEFINITIONS

a. **Decision Support System (DSS) Standardization of Structure** (i.e., bring Veterans Health Administration (VHA) facilities' DSS Structure into conformity with the Basic DSS Model). Utilizing the Basic DSS Model will promote benchmarking and comparisons of patient specific costing and practice patterns between facilities at the department group and intermediate product levels.

(1) Conforming to the basic DSS Model does not mean that every Department of Veterans Affairs (VA) medical center must have the same type of cases, the same number of cases, the same way of creating lab tests (supplies and equipment), or the same way of producing primary care encounters (labor types and proportions can vary.)

(2) The basic DSS Model does not require every VA medical center to have the same type and number of production units (DSS departments), the same type and number of intermediate products, the same intermediate product costs, or the same Relative Value Units (RVUs).

NOTE: *DSS definitions and other standardization documents referenced in this attachment can be located at the DSS documentation web site:*
http://152.128.193.247/dss/dsslibrary/library/documents

b. **DSS Basic Model.** The basic DSS model has three major components of standardization:

(1) **The DSS Production Unit or DSS Department.** The basic building block of DSS is the production unit or DSS department. A DSS department forms the basis from which non-labor (supply and equipment) costs, labor costs, and workload volumes are integrated. It is critical for VHA to develop production unit structures, which optimize the management reporting and analysis capabilities of DSS while accurately calculating product cost within each production unit. A DSS department is defined by a discrete labor pool using specific supplies and/or equipment to produce a similar set of products, i.e., a Hematology DSS Department using equipment and reagents to complete a group of tests (Hemoglobin, hematocrit, etc.). In an ideal model each DSS Department would have a natural management owner for both the budget and the productivity of the unit. The labor pool would be devoting a majority of direct care time to producing a set of similar products. The varying size and missions of each VA facility require that the type and number of production units or departments vary with the differing aspects of each facility, but that the definition of each type of DSS department be standard enough to support multi-facility comparisons.

(2) **DSS Nationally-numbered, intermediate products.** The next piece of the DSS basic model, concerns nationally standard intermediate products. For reliable costing and for productivity analyses per responsible work group, all products should be attached to the DSS departments that produce those products. Some DSS departments only collect descriptive

products called STATS (Statistics). These DSS departments currently capture the Current Procedure Terminology (CPT-4), HCPCs, and telephone from the PCE encounters and occasions of service using the PCE package. Production areas use specific Veterans Health Information and Technology Architecture (VISTA) packages to capture both inpatient and outpatient workload. Only national product numbers should be used to define DSS products. The National DSS Product list is revised at least annually and is sent to all DSS Sites Managers (refer to DSS documentation web site). Input from the field for new products is requested each year by the Bedford Technical Office.

(3) **The DSS Account Level Budgeter (ALB) Cost Center (costs collected at the DSS Production Unit level.).** The last piece of the Basic Model is matching the Account Level Budgeter Cost Center (ALBCC) that will capture the costs with the relevant DSS Department. This link between cost and workload provides the cost per product that is attached to the patient episode of care. ALBCCs provide a more refined level of detail than VA cost centers that have historically been used at the Clinical Service level to classify both dollars and hours.

c. **DSS ALBCC.** An organizational unit where costs are identified in a practical manner in terms of labor, supply, and capital cost and are aggregated at the DSS department level. A national list of ALBCCs and DSS Departments is updated at least annually by the Bedford Technical Support Office.

d. **Nationally Standard Production Units and/or DSS Departments**

(1) DSS department is defined by a discrete labor pool using specific supplies and/or equipment to produce a similar set of products. Define DSS departments large enough so that management responsibility and accountability exist. The production unit should have identifiable labor and products. It is suggested that a production unit have at least .4 full-time employee equivalent (FTEE) and/or produce an average of 16 products per week (832 annually). The final decision on production unit sizing however should be left to the Veterans Integrated Service Network (VISN) and facility.

(2) It is necessary to keep the production unit specific with very closely related products in order to have the most accurate calculation of product costs. Guard against aggregating large numbers of FTEE and products into one production unit. Example of large numbers of FTEE and products includes grouping all FTEE, costs, and products for a large Service, i.e. Psychiatry, into one DSS department. This will decrease the ability to perform efficiency analyses and lowers the cost precision of a product. Product costing and productivity reporting are maximized when there is a balance between the number of FTEEs within a production unit, the number of products assigned to the production unit and the frequency with which the products are produced. This may become more difficult as the VA facilities become more efficient and staffs provide more cross-coverage, leading to more consolidation of DSS Departments.

e. **Nationally Standard DSS Products.** After DSS departments are assigned to the DSS Department Cost Manager (DCM) system, a standardized set of intermediate products (IP), that are appropriate for describing the departments functions, are identified and added based on past experience and future expectations. Each facility's products are captured from the VISTA applications using a set of nationally uniform utilization extracts. The number of VISTA extracts will change from year to year to

accommodate changes in VISTA. The DSS VISTA extract for the current year can be found on the DSS documentation web site.

f. **Nationally-Standard DSS Product Feeder Systems, Feeder Locations and Feeder Keys.** The products are developed in DSS, using a specific set of data elements unique to each VISTA package. The VISTA DSS extracts either directly or through the Statistical Analysis System (SAS) modification at the Austin Automation Center provide the critical three-part data set costing: to a standardized feeder system, a feeder location and feeder key. These may be, depending upon the feeder system, nationally standard, or facility-specific with a standardized format. ***NOTE:*** *The unique combination of feeder system, feeder key and feeder location determines the template DSS Intermediate Product (IP) number, and DCM department number.*

g. **All Other General Definitions.** Refer to DSS Glossary on DSS documentation web site.

2. STANDARDIZATION OF DSS STRUCTURES

a. **DSS Department Relations to ALB Cost Centers**

(1) **Mapping of ALBCCs to Departments**

(a) The ALBCC master list provided annually to DSS sites provides standardized work unit descriptions and serves as a guide. The ALBCC is at a detailed level that permits accurate classification of costs and hours into work units with a distinct intermediate product set. ***NOTE:*** *Each DSS ALBCC will have at least a six-character identifier (6 to 8 characters long). The first three digits normally represent the VA cost center of the responsible Service. The fourth and fifth characters represent the national DSS production unit identifier and should match the 2nd and 3rd characters of its corresponding DCM Department. The final sixth character represents the division, CBOC or satellite clinic indicator. Other facility specific characters may be added after the sixth character for more detailed information such as letters for the primary care teams (except E) as the seventh character. Note that "-1,-2,-3,etc." had previously been used as the 7th and 8th characters to delineate primary care teams or compensation and pension (C&P). Hyphens should not be used for new ALBCC from the beginning of FY 1998 forward.*

(b) Sites must use only the ALBCC prefix on the national DSS Parent Clinical Service Code Table (Refer to DSS documentation web site). If a new prefix is required, approval must be received in advance from the Bedford Technical Support Office. The fourth and fifth characters of the ALBCC must match the second and third characters of the DSS Department with the following exceptions:

1. Departments with small volumes or less than .4 FTEE.

2. Inpatient DSS Departments, which do not send product volumes to DSS, i.e., application of the 5WW1 department.

3. Those cost centers that have been determined to be exempt from product costs do not match a DSS department.

(2) **Exceptions for mapping ALBCCs to Departments**

(a) Guideline for mapping between ALB and DCM for small volumes. If a particular collectible Unit in ALB has small volume or FTEE, then the ALBCC can be mapped to a larger DSS Department within the same service; for example a small dermatology clinic could be mapped to another "General Medicine Clinic." It should not be mapped to a surgical or psychiatry clinic.

(b) Guideline for inpatient work units not collecting product volumes for DSS, i.e., cardiac catherization, bronchoscopy laboratory. The ALBCCs and Descriptions should reflect the nature of the inpatient work unit. Each ALBCC will be matched to the 5WW1 DSS Department, general inpatient support with a room day as the product.

(c) Fiscal has identified specific cost centers as being exempt from product costs. These cost centers either capture cost for non-VA workload that does not currently have products captured in VISTA or does not provide direct care or support of direct care staff. Refer to DSS National Department/ALBCC List (DSS Documentation web site) for list of exempt ALBCCs.

b. **Intermediate Product Department (IPD Number) Naming Conventions**

(1) Guideline for use of Department characters 1 - 6. Once the production unit is identified, a standard DSS department identifier is assigned. Each direct department will have at least a four-character department identifier. The 1st character identifies the clinical service producing the products. The 2nd and 3rd characters represent a National DSS production unit identifier. The 4th character identifies each division or satellite outpatient clinic. Other facility specific characters may be added after the 4th character for more detailed information such as letters for the primary care teams (except E) as the 5th character. Note that "-1, -2, -3, etc." had previously been used as the 5th and 6th characters to delineate primary care teams or C&P. As of Fiscal Year (FY) 1998, no new DCM Departments should be created using the dash, i.e., MMM1-2.

(2) The DSS Departments must match the 2nd and 3rd characters with the DSS Departments on the National DSS Department Master List (refer to DSS Documentation web site). In some instances the 1st, 2nd and 3rd characters of the DSS Department number must match exactly with the National DSS Department Master List. These cases include all DSS production unit codes (see Column D on Table A, National DSS Department Master List), where the 2nd character starts with zero and all production units marked as KLF-DSS indicators in Column G on Table A, National DSS Department Master List.

(3) Only production units (DCM Departments) described on the current DSS National Department and/or ALBCC list should be used by VHA facilities, with some exceptions that are noted on the National List. Input from the field for new production unit codes is solicited by BTSO at least annually.

NOTE: *Remember. Product costing and productivity reporting are maximized when there is a balance between the number of FTEEs within a production unit, the number of products assigned to the production unit and the frequency with which the products are produced.*

c. **Intermediate Products (DSS IP Number)**

(1) DSS maintains, in a secure master region, a set of templated DCM departments for the sole purpose of providing a repository for a set of templated standard IP numbers for each site. The DSS system sequentially assigns the IP number. The unique combination of feeder system, feeder key and feeder location determines the template DSS Intermediate Product (IP) Number and the DCM Department (IPD) Number. ***NOTE:*** *Additionally, each DSS template department must have at least a high, a medium and a low cost product and where appropriate, such as pharmacy and prosthetics, a group of products covering several cost ranges, to be used if the site cannot match their product to the template.* These products have a feeder system, feeder key, and a long and short description and are the only intermediate products, which a site can use. The template is updated at least annually either through the addition of new feeder systems or changes in professional standard measurements or by site request for new products.

(2) The facility's IP numbers will currently match to the templated IP numbers on the DSS National Product List. Four feeder systems, CLI, ECS, ROOM, and SUR have prescribed exceptions that permit latitudes, when necessary, in assigning the templated IP numbers for departments related to those Feeder Systems.

(3) Exceptions are:

(a) CLI

1. CLI is used for Clinic products that are expressed in units of time that varies from site to site. It is not desirable or significantly material from a cost perspective to assign a specific IP number to each unit of time available. Sites should consolidate variable length clinics into the IP number with the closest time (within 15 minutes). If a time increment is not available on the national list, the next closest unused product on the national list may be modified and used. ***NOTE:*** *Local VA medical centers set the labor time RVU to match their actual labor time*

2. Each separate clinic location identified by a DSS identifier is a separate department. The DSS department should be chosen according to the Primary DSS Identifier. Example: DSS identifier (303) would be matched to the MM31 Cardiology Department. This is displayed on the National DSS Department and/or ALBCC List. Several clinic locations maybe consolidated into a single DSS Department, when significant cross coverage occurs or the workload is too small to justify a separate department. Consolidate production units within the same primary service, i.e., Medicine production units with other medicine production units.

(b) ROOM. ROOM is used to collect a bed a day of care for each patient. Currently there are groups of ROOM products for the basic RN bedday, ward clerk, ward stock SPD and MD bed days for all the major production units. If there are not enough IP numbers for a given category, sites are allowed to use a similar IP in that same group.

(c) SUR. SUR surgical implants do not have a Nationally-standard, identification code in the VISTA Surgery package. The national DSS-templated surgical implant feeder key on DSS is selected by the site to map their idiosyncratic VISTA surgical implant code to, after a local, hands-on match using the

product description and some cost data. In this way, local VA medical center variation is nationally standardized by feeder key mapping to the national DSS surgical implant product list.

(d) ECS. ECS Event Capture is used in the facilities when no other automated data collection system is available. The feeder keys may be a CPT-4 code, a HCPC code, a National VA-specific code, or one of 250 locally defined codes to be used when neither a CPT code nor a VA specific code exists. Each code has a unique IP number assigned. If a site uses one of the 250 locally defined codes, they should request, for the next fiscal year, a permanent IP number with either a CPT or VA specific code.

(4) **Comment on Use of Revenue Codes instead of Stable Cost-Product Codes (CPT).** DSS utilizes CPT codes as feeder keys with unique DSS IP numbers for products in several feeder systems (ASC, ECS, and RAD) when no other descriptor is available. Private sector costing uses internal billing numbers that include the concatenated pair: production unit and product number. This internal number pair is stable but is easily cross-referenced to CPTs by a Charge Detail Master (a CPT-4 code is when sending out bills). CPT-4 codes are not static. CPT descriptions periodically change and CPTs are periodically inactivated which makes their use as products very problematic. In order to maintain a stable product base, DSS does not inactivate a DSS IP number when the CPT referenced to it is inactivated nor does DSS change descriptions for the DSS IP in the template region. This is mandatory to maintain historical data accuracy. New CPTs are added to the database as new IP numbers. As a consequence there will, in certain instances, be a variation from site to site on the meaning of some CPT codes depending upon how extensively the sites and VISNs use CPTs for products in their DSS departments.

3. DSS FINANCIAL DOCUMENTATION

The DSS Fiscal Guideline Documents that are reviewed and updated annually by the DSS Fiscal Office are Listed as follows

a. **Mapping of Specific Labor and Supply Accounts to Specific ALBCCs.** An example would be only BOC 1081, 1082, and 1083 and 1043 through 1048 labor accounts are mapped to MD Bedday ALBCCs.

b. **VA Account List.** Follow the VA Account list with regards to account, cost type, cost category, and at the minimum the stated attributes. Facility specific attributes may be added to facilitate VISN or facility reporting (refer to DSS Documentation web site for VA Account list).

c. **Mapping Research and Education Support Costs.** To be able to distinguish the costs associated with each of our missions, DSS has developed guidelines so that patient care, administrative, research, and education and training labor activities can each be identified. These guidelines allow for the consistent application of common labor definitions and determination of labor costs throughout VHA. The definitions for patient care, education and training, research support, and administrative support are contained in the Research/Teaching Guidelines (refer to DSS Documentation web site).

d. **Allocation of Indirect Costs to the Direct DSS Departments.** The allocation structure enables indirect costs to be allocated to products in direct departments. DCM costs are pushed to Clinical Case Manager (CCM) and the patient database. All costs involved in producing each

product are pushed to the patient level. The National Allocation Structure Table is reviewed at least annually by the FISCAL part of BTSO and released to the sites for appropriate structure changes (refer to DSS Documentation web site, National DSS Indirect Allocation Sequence Table).

e. **ALBCC Reporting Groups.** ALBCCs may be grouped by several different ways to enhance reporting capability (especially product line reporting). ALBCC reporting groups can be used to report on Service lines and be rearranged as organizational managers change, or an Exempt Group maybe used in conjunction with CCM costs to provide the overall cost of the facility that is currently being brought into DSS.

f. **Variable Labor and/or Fixed Direct Labor Splits.** In order to accurately represent working supervisors' activities and improve the accuracy of the cost distribution reported for the department that they manage, all Direct Care Departments working supervisors' labor costs (all labor subaccounts but 1001/1002) will be carried in the corresponding Direct Care cost centers, and will be split between Fixed Direct Labor (FDL) and Variable Labor (VL). If the employee does not serve a significant administrative role (>5 hours in a 40 hour week or 12.5%), all their time is considered Variable Labor.

g. **Variable Labor 5 (VL5) Accounts and Hourly Rates.** For outpatient VL 5 accounts, ensure that there are products being collected to match with the VL 5 hourly rate.

(1) For inpatient VL 5 accounts that do not have products, send the dollars to 5WW1. VL 5 accounts should only be used in Direct Departments. If the account is a VL 5 (according to the DSS VA Account List) and it belongs in an Indirect Department and/or ALBCC, make it either.

(2) Fixed Direct Labor (FDL) if the ALBCC is below 401001 or Fixed Direct Other (FDO) if the ALBCC is 401001 and above.

4. MISCELLANEOUS STRUCTURE

a. **Grouping of Departments**

(1) **Common Departments.** National Common Department Groups will be based on the 2nd and 3rd characters of the DSS Departments and in some cases the 1st, 2nd, and 3rd characters. Sites must follow the department naming conventions in order to have accurate national common department groups. The National Common Department Group Structure is an automated process that does not require the facility DSS teams to manually construct the groups. These groups allow for like comparisons at the higher aggregate level. The concept requires grouping a set of DSS departments into a common department. An example would be linking all nursing wards to a common department called Bedday241. By defining common departments similar utilization and cost can be displayed for a group of patients. Analysis requires review of all common departments in noting differences between facilities.

NOTE: *The DSS National Rollup structure has been stable since 1997 (Refer to DSS Documentation web site, National DSS Rollup Structure).*

(2) **DCM Department Reporting Groups.** DCM Department Reporting Groups should be used to do "product line" reporting. This allows DSS Departments to retain their specificity of products and costs and yet managers can look at more than one department (if they have more than one). Since DSS departments show the work at the production unit level, they can easily be assembled into reporting groups to reflect the organizational structure of the medical center. As the organizational structure changes then the groups change. An example would be grouping all Lab departments under a Common DSS Department of Lab. Another example would be to group several departments together as a service level product line, i.e. Mental Health Product Line defined by a group may contain Psychiatry departments, Psychology departments, several Social Work departments and so on into one group called Mental Health Product Line. Product Lines have not been standardized across the nation; therefore the VISN's and individual facilities need to construct groups as necessary to facilitate reporting.

b. **Day Types.** This is a DSS database field to assist in analyzing the type of care a patient receives each and every day of a patient's hospital stay. To provide comparative data between facilities Day Types need to be standard across all facilities. The Day Types and the process for updating day types within the DSS structure is being revised. Upon completion of this review, new guidelines will be made available to the field for implementation.